



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/990,739	11/16/2001	David H. Harris	5087-27	3310

20575 7590 12/06/2006

MARGER JOHNSON & MCCOLLOM, P.C.  
210 SW MORRISON STREET, SUITE 400  
PORTLAND, OR 97204

EXAMINER

DANG, KHANH

ART UNIT PAPER NUMBER

2111

DATE MAILED: 12/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/990,739	HARRIS ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Khanh Dang	2111	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 October 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 and 12-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-10 and 12-20 is/are allowed.
- 6) ☒ Claim(s) 1 and 3-5 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 October 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

Art Unit: 2111

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Kobayashi (6,199,122).

As broadly drafted, these claims do not define any structure/step that differs from Kobayashi.

With regard to claim 1, Kobayashi discloses a method of communicating with a mass storage device, comprising: receiving ATA/ATAPI signals from a mass storage device into a bridging circuit (in Kobayashi, ATA signals from the memory device 13 of the storage device 12, for example, are received by a single chip conversion controller 122, for example, or the so-called "bridging circuit"; see at least column 1, lines 1-22, column 5, lines 56-58, and column 6, lines 12-13; note also that ATA standard in Kobayashi includes ATA/ATAPI, see definition of ATA from Wikipedia cited below); converting the ATA/ATAPI signals from the mass storage device into USB signals using the bridging circuit (in Kobayashi, the ATA signals from the memory device 13 of the

Art Unit: 2111

storage device 12 is converted into USB signals by the single chip conversion controller 122; see at least column 6, lines 1-22, and column 12, lines 33-39) ; and outputting the USB signals from the bridging circuit (in Kobayashi, USB signals are outputted from the conversion controller 122; see at least column 6, lines 1-22, and column 12, lines 33-39).

With regard to claim 3, it is clear from at least Fig. 1, and at least column 6, lines 12-13, that the conversion controller is a single chip. Thus, the conversion controller single chip 122 must be provided on a motherboard of the mass storage device 12 (column 5, lines 56-58).

With regard to claim 4, since claim 1 is so broadly drafted, the motherboard of the storage device 12 having memory device 13 connected thereto is in fact, can be considered as a "secondary board." Note that the computer clearly includes another motherboard or mainboard.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi.

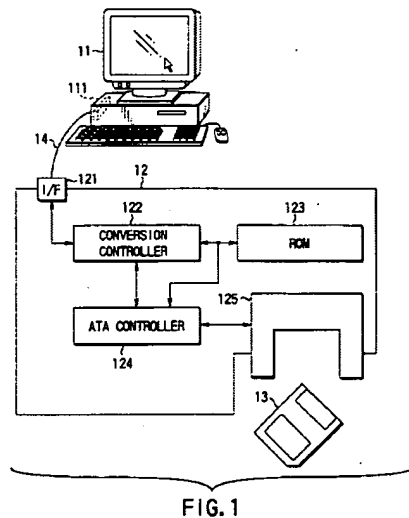
Kobayashi, as discussed above, discloses the claimed invention including the use of a single chip conversion controller 122 or the so-called "bridge circuit."

Kobayashi does not disclose that the single chip conversion controller 122 is provided on a secondary board, wherein a mass storage device motherboard outputs ATA/ATAPI signals, and wherein the secondary board receives the ATA/ATAPI signals from the mass storage device motherboard and converts them into USB signals.

In other words, the difference between the claimed subject matter and that of Kobayashi resides on the fact that the in Kobayashi, the single chip conversion controller 122 resides on the motherboard of the storage device 12, whereas in the instant application, the conversion controller or "bridge circuit" (as claimed in claim 5) is provided on a separate or "secondary" board.

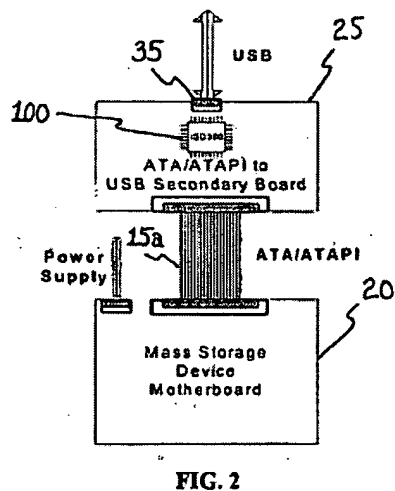
Such a difference is best illustrated by the following figures:

**Fig. 1 of Kobayashi:**



Note that the single chip conversion controller 122 or the so-called "bridge circuit" is provided on the motherboard of the storage device 12.

**Fig. 2 of the instant Application:**



Note that the so-called "bridge circuit" (single chip) 100 is provided on a separate "secondary" board 25, instead of on the motherboard 20 of the storage device.

Art Unit: 2111

However, it is clear that whether the single chip conversion controller 122 or the so-called "bridge circuit" is provided on the motherboard of the storage device as in Kobayashi, or provided on a separate or "secondary" board as in claim 5, the conversion controller 122 would perform the same function, which is a function of converting between the ATA/ATAPI protocol to the USB protocol and vice versa. As matter of fact, as disclosed in Applicants' summary of the Invention, the crux of Applicants' claimed invention is a single bridging chip for converting ATA/ATAPI protocol to USB protocol and vice versa. The bridging circuit/chip 100 would perform the same function whether the bridging chip 100 is provided on a motherboard of the storage device (page 2, lines 8-12 of the originally filed specification, and Fig. 3):

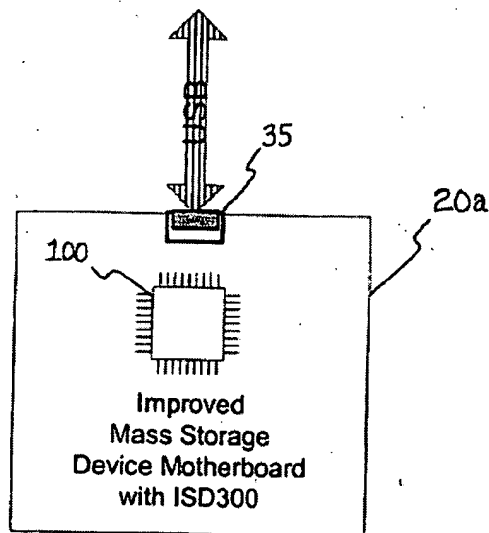


FIG. 3

or, **alternatively**, as a design choice, the bridging chip 100 is provided on a secondary board (see page 2, lines 17-21 of the originally filed specification, and Fig. 2)

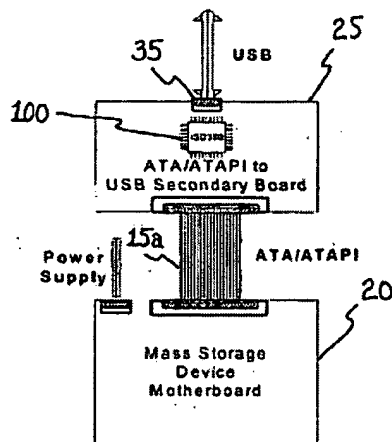


FIG. 2

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a separate or "secondary" board for the single chip conversion controller 122 of Kobayashi, since the conversion controller chip 122 of Kobayashi would perform the same function whether on the same board with the storage device 12 or on a separate or "secondary board" and, thus, providing a separate or "secondary board" for the single chip conversion controller 122 of Kobayashi is a matter of design choice, as also acknowledged by Applicants, and only involves ordinary skill in the art.



Art Unit: 2111

### ***Response to Arguments***

Applicants' arguments filed 10/12/2006 have been fully considered but they are not persuasive.

At the outset, Applicants are reminded that claims subject to examination will be given their broadest reasonable interpretation consistent with the specification. *In re Morris*, 127 F.3d 1048, 1054-55 (Fed. Cir. 1997). As a matter of fact, the "examiner has the duty of police claim language by giving it the broadest reasonable interpretation." *Springs Window Fashions LP v. Novo Industries, L.P.*, 65 USPQ2d 1862, 1830, (Fed. Cir. 2003). Applicants are also reminded that claimed subject matter not the specification, is the measure of the invention. Disclosure contained in the specification cannot be read into the claims for the purpose of avoiding the prior art. *In re Sporck*, 55 CCPA 743, 386 F.2d, 155 USPQ 687 (1986).

With this in mind, the discussion will focus on how the terms and relationships thereof in the claims are met by the references. Response to any limitations that are not in the claims or any arguments that are irrelevant and/or do not relate to any specific claim language will not be warranted.

### **The 102 Rejection:**

With regard to claim 1, Applicants argue that "Kobayashi does not teach such a state machine responsive to embedded commands in the ATA/ATAPI signals."

Art Unit: 2111

Contrary to Applicants' argument, at least the ROM 123 is implemented as the "state machine." See at least column 6, lines 12-40; column 7, lines 19-24; column 9, line 1 to column 10, line 37; column 11, lines 12-67; and definition of "state machine" (cited below).

**The 103 Rejection:**

Applicants do not separately argue against the 103 Rejection.

***Allowable Subject Matter***

Claims 6-10, and 12-20, as amended, are allowable over the prior art of record.

Claim 2, as amended, is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Relevant Art***

Definition of "state machine" is cited.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh Dang whose telephone number is 571-272-3626. The examiner can normally be reached on Monday-Friday from 9:AM to 5:PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart, can be reached on 571-272-3632. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

Art Unit: 2111

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

*Karen D. Davis*

2009/09/23  
10:00 AM  
EBC